64081

2011 FIELD CROP BUDGETS

Publication 60

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These crop budgets are a simple format for estimating expenses. The sample costs are only a guide to illustrate a method of preparing your projections. They are based on many assumptions, including seeding rates, levels of fertilizer use, etc. Due to regional differences there may be considerable variation in results.

To project your break-even price after total costs, enter your farm figures in the spaces provided. The resulting estimate will help you choose your crop mix and set target prices and marketing strategies for your farm.

Electronic versions of these crop budget worksheets can be found at www.ontario.ca/agbusiness under *Cost of Production Budgets.*

Ministry of Agriculture, Food and Rural Affairs

Ontario

2011 FIELD CROP BUDGETS

Crop budgets are a management tool to estimate costs and evaluate cropping alternatives. The sample costs are not averages or recommended treatments. The budgets comprise treatments derived from crop advisors in the areas where the crops are commonly grown. There will be differences due to growing region, cropping practices, individual needs and yield expectations. The budgets, unless indicated otherwise, are based on conventional tillage practices. Seed costs, except for the *Bacillus thuringiensis* (Bt), Roundup Ready (RR) and herbicide-tolerant corn, spring canola and soybeans, are for non-genetically enhanced varieties. The budgets developed for Bt, RR or herbicide-tolerant varieties do not represent an endorsement of these products. They are included due to the current predominance of these production systems in field crop operations.

Identity Preserved (IP) crops require budgeting for any extra expenses and revenue — for example, increased seed, weed control, storage and equipment cleaning costs. Some of the budgets provide a line item for this.

Interest rates were calculated at 4.0% for the period between planting and harvest.

These budgets will be most meaningful if you use your expected yields and specific costs in developing production plans. Sample costs were taken from the 2011 Ontario Enterprise Budgets. The crop insurance premiums shown are the producer premiums at the highest coverage level and at the floating-price, if available.

The estimated costs for machinery are derived from agricultural engineering formulas and Ontario average custom rates. The Ontario average custom rates are allocated across the six machinery-related expenses. It is recommended that you use your records to derive your costs. Experience is the best guide to help budget machinery costs. Prior year's statements of income and expenses can provide information on equipment repairs, maintenance and fuel costs. The portion of those costs that relate to crop production can be divided by the acres of crop produced to arrive at a cost per acre.

Overhead expenses are a major part of the total cost of doing business. In addition to the depreciation of machinery, include depreciation on all related tools and storage buildings. Land costs would include property tax and any other land-related costs. Other overhead expenses should include insurance, professional fees, office, vehicles and storage. In all cases, divide overhead expenses by the acreage of crop to express costs on a per acre basis. Interest on investment is an opportunity cost to you — the rate of return that you expect or want on your invested capital.

If there are significant debt commitments for land and equipment, an alternative method of budgeting overhead expenses is to use the debt servicing requirements. In this case, use the actual interest and principal payment commitments, rather than depreciation and expected return on invested capital.

"Total Revenue" is the yield you expect multiplied by the price you expect. Yield information is most accurate if based on your experience with the land and techniques you will be using. If you do not have such records, check with AGRICORP or a local farm supply dealer. They can help you develop plans and reasonable expectations for your crops.

"Gross Margin" is the difference between total operating expenses and total revenue. "Operating Expenses" (seed, fertilizer, fuel, repairs) change with the crop grown and the production blend used. "Fixed or (overhead) Costs" will show little or no change whether one crop or another is grown. "Gross Margin" is a quick and easy measure for comparing relative profitability among your cropping choices.

Table 1. Adjustment for nitrogen requirement to crops following a legume crop

	N requirement reduction (kg/ha)	
Type of crop	**Corn**	**Other crops**
Less than 1/3 legume	0	0
1/3 to 1/2 legume	55	55
1/2 or more legume	110	110
Perennial legumes seeded/ploughed in same year	80	45[1]
Soybean and field bean residue	30	0

[1] Applies where the legume stand is thick and over 40 cm (16 in.) high.

2011 Crop Comparison Summary Table for Selected Field Crops ($/acre)*

	Corn Conventional Tillage	Herbicide-Tolerant Spring Canola	Non-GMO Soybeans No till	Roundup Ready Soybeans No till	Coloured Beans	White/ Black Beans	Soft Winter Wheat No till	Barley	Hard Red Spring Wheat
Seed	95.30	48.90	55.80	66.45	154.00	70.00	44.90	40.30	55.85
Fertilizer	99.60	72.75	23.05	23.05	23.05	23.05	69.60	41.90	63.50
Pesticides	21.60	12.00	46.25	17.60	49.20	45.95	7.50	6.95	6.95
Total Inputs	**216.50**	**133.65**	**125.10**	**107.10**	**226.25**	**139.00**	**122.00**	**89.15**	**126.30**
Tillage	47.00	42.20			70.15	47.55		42.20	42.20
Planting	19.40	18.40	23.40	23.40	19.40	24.40	23.40	18.40	18.40
Spraying	10.10	10.10	20.15	20.15	20.15	20.15	10.10	10.10	10.10
Fertilizing	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
Harvesting & trucking	73.20	49.15	48.95	48.95	88.60	57.05	55.75	50.85	49.15
Total Machinery	**159.80**	**129.95**	**102.60**	**102.60**	**208.40**	**159.25**	**99.35**	**131.65**	**129.95**
Drying	68.35		11.05	11.05					
Crop insurance	14.00	13.70	11.75	11.75	33.20	24.20	10.65	7.05	8.30
Interest @ 4.0%	8.80	4.50	4.50	4.15	7.15	5.30	6.65	4.90	4.25
Marketing & other	32.95	3.65	10.70	10.70	4.30	6.90	4.20		2.60
Total Costs	**500.40**	**285.45**	**265.70**	**247.35**	**479.30**	**334.65**	**242.85**	**232.75**	**271.40**
Yield									
Price									
Gross Return									
Net Margin/Acre									
Less:									
Land cost/rent									
Utilities/acct/misc.									
Net Return per Acre									

* The crop comparison summary table is derived from the individual budgets in the publication. Some expense items have been combined in the summary table. For the break-out of the individual expenses, refer to the respective budget in the publication.

ALFALFA-TIMOTHY HAY

DIRECT SEEDING ESTABLISHMENT	Sample Costs/Acre	Your Farm Budget
Seed – 12 lb/acre alfalfa	51.65	
Other seed (timothy – 4 lb/acre)	7.40	
Inoculant	1.05	
Fertilizer – 40 kg/ha P	15.95	
– 30 kg/ha K	11.30	
Herbicide – burndown and broadleaf control	24.70	
Crop insurance	2.55	
Tractor and Machine Expenses		
Fuel (32 L) and lubricants	31.20	
Repairs	19.55	
Custom work – (2 pesticide applications)	20.15	
– (2 fertilizer applications, mixing and delivery)	20.20	
– (bale wrapping – 1 cut)	30.85	
Twine		
Operator labour (self or hired)	27.50	
Interest	9.45	
Total Establishment Year Expenses	**273.50**	
ANNUAL OPERATING EXPENSES (assuming 2 cuts)*		
Establishment year expenses – over 4 years (less establishment year sales)	20.75	
Fertilizer – 130 kg/ha K (applied in fall)	49.00	
– other		
Tractor and Machine Expenses		
Fuel (19 L) and lubricants	18.85	
Repairs	14.90	
Twine		
Crop insurance	9.25	
Custom work – (2 fertilizer applications, mixing and delivery)	20.20	
– (bale wrapping)	61.70	
Other costs		
Land rent		
Operator labour (self or hired)	26.25	
Interest on operating	4.65	
Total Annual Operating Expenses	**225.55**	
*Note: Assuming 3 cuts, the annual operating expenses per acre would increase.		
REVENUE		
Expected yield _____		
Expected price _____		
Total Revenue (Yield × Price)		
GROSS MARGIN (Revenue – Operating Expenses)		
OVERHEAD EXPENSES		
Machinery – depreciation	19.00	
– interest on investment	11.40	
Land		
Other overhead	4.75	
NITROGEN CREDIT TO FOLLOWING CROPS IN ROTATION		
Nitrogen credit ($/acre = N reduction (from Table 1 × price of N)		
Grain yield increase		
Total benefits/year		
TOTAL EXPENSES	**260.70**	

BARLEY

OPERATING EXPENSES (costs based on projected yield of 1.5 tonne/acre (70 bu/acre))	Sample Costs/Acre	Your Farm Budget
Seed – 120 lb/acre certified treated (1.0–1.4 M seeds/acre)	40.30	
Fertilizer – 74 kg/ha N (2,800 or less Corn Heat Units (CHUs))	36.20	
– 46 kg/ha N (2,800 or more CHUs)	22.65	
– 20 kg/ha P	7.95	
– 30 kg/ha K	11.30	
Herbicide – annual grasses and broadleaf weeds	6.95	
– other		
Fungicide, if required		
Tractor and Machine Expenses		
Fuel (17 L) and lubricants	16.50	
Repairs and maintenance	15.55	
Crop insurance	7.05	
Custom work – (fertilizer application, mixing and delivery)	10.10	
– (pesticide application)	10.10	
– other		
Trucking ($8.15/tonne)	12.20	
Storage		
Land rent		
Operator labour (self or hired)	12.45	
Interest on operating	4.90	
Total Operating Expenses – Grain (2,800 or less CHUs)	**191.55**	
Total Operating Expenses – Grain (2,800 or more CHUs)	**178.00**	
Expenses for Straw		
Tractor and Machine Expenses		
Fuel (3 L) and lubricants	3.15	
Repairs and maintenance	3.25	
Twine	2.80	
Other	11.55	
Total Operating Expenses – Straw	**20.75**	
Total Operating Expenses (2,800 or less CHUs)	**212.30**	
Total Operating Expenses (2,800 or more CHUs)	**198.75**	
REVENUE		
Expected barley yield _____		
Expected barley price _____		
Total Market Revenue (Yield × Price)		
Program payment		
Total Barley Revenue		
Expected straw yield _____		
Expected straw price _____		
Total Straw Revenue (Yield × Price)		
Total Revenue		
GROSS MARGIN (Revenue – Operating Expenses)		

OVERHEAD EXPENSES	Barley Only	Barley + Straw	
Machinery – depreciation	29.05	33.20	
– interest on investment	14.45	16.45	
Land			
Other overhead	11.25	12.30	
TOTAL EXPENSES (2,800 or less CHUs)	**246.30**	**274.25**	
TOTAL EXPENSES (2,800 or more CHUs)	**232.75**	**260.70**	

Break-even price on your farm is: (total expenses/expected yield) _____

SPRING CANOLA

	Herbicide Tolerant	
OPERATING EXPENSES (costs based on projected yield of 0.91 tonne/acre (2,000 lb/acre))	**Sample Costs/Acre**	**Your Farm Budget**
Seed – 5 lb/acre – hybrid, treated	48.90	
Fertilizer – 100 kg/ha N (166 kg/ha urea + 112 kg/ha ammonium sulphate)[1]	57.25	
– 20 kg/ha P	7.95	
– 20 kg/ha K	7.55	
Herbicide – preplant, incorporated		
– mustard control, if required		
– other weed control	12.00	
Technology use agreement		
Insecticide, if required		
Fungicide, if required		
Tractor and Machine Expenses		
Fuel (17 L) and lubricants	17.10	
Repairs and maintenance	17.25	
Marketing fees ($4.00/tonne)	3.65	
Crop insurance	13.70	
Custom work – (fertilizer application, mixing and delivery)	10.10	
– (pesticide application)	10.10	
– other		
Trucking ($8.15/tonne)	7.40	
Storage		
Land rent		
Operator labour (self or hired)	11.05	
Interest on operating	4.50	
Total Operating Expenses	**228.50**	
REVENUE		
Expected yield _____		
Expected price _____		
Total Market Revenue (Yield × Price)		
Program payment		
Total Revenue		
GROSS MARGIN (Revenue – Operating Expenses)		
OVERHEAD EXPENSES		
Machinery – depreciation	29.95	
– interest on investment	15.35	
Land		
Other overhead	11.60	
TOTAL EXPENSES	**285.40**	

Break-even price on your farm is: (total expenses/expected yield)

[1] Nitrogen rate is based on nitrogen price of $ 1.22/kg ($ 0.55/lb) N and a canola price of $499/tonne. 112 kg/ha ammonium sulphate (21-0-0-24) supplies 27 kg/ha sulphur.

See the canola section of the OMAFRA *Agronomy Guide for Field Crops*, Publication 811, for more accurate nitrogen requirements for canola, adjusted for yield and fertilizer cost.

WINTER CANOLA

OPERATING EXPENSES (costs based on projected yield of 1.3 tonne/acre)		Sample Costs/Acre	Your Farm Budget
Seed*	– 3.5 lb/acre – hybrid, treated	31.15	
Fertilizer**	– 200 kg/ha N (383 kg/ha urea + 113 kg/ha ammonium sulphate)[1]	106.55	
	– 20 kg/ha P	7.95	
	– 20 kg/ha K	7.55	
Herbicide – volunteer cereal control		8.30	
Insecticide, if required (cabbage seedpod weevil)		7.20	
Fungicide, if required			
Tractor and Machine Expenses			
Fuel (13 L), lubricants		12.80	
Repairs and maintenance		13.85	
Marketing fees ($4.00/tonne)		5.20	
Crop insurance		13.70	
Custom work	– (fertilizer application, mixing and delivery)	10.10	
	– (2 pesticide applications)	20.15	
	– other		
Trucking ($8.15/tonne)		10.60	
Storage			
Land rent			
Operator labour (self or hired)		6.85	
Interest on operating		5.25	
	Total Operating Expenses	**267.20**	
REVENUE			
Expected yield _____			
Expected price _____			
	Total Market Revenue (Yield × Price)		
Program payment			
	Total Revenue		
	GROSS MARGIN (Revenue – Operating Expenses)		
OVERHEAD EXPENSES			
Machinery	– depreciation	22.45	
	– interest on investment	12.05	
Land			
Other overhead		8.70	
	TOTAL EXPENSES (Hybrid)	**310.40**	

* Seeding rate recommended range is 3–5 lb/acre. The lower rate may be difficult to achieve with some seed drills.

**Fertilizer recommendation is for a field testing low in phosphorus and potassium. Additional nitrogen in the fall may be beneficial if seeding is delayed.

[1] 112 kg/ha ammonium sulphate (21-0-0-24) supplies 27 kg/ha sulphur.

COLOURED BEANS

OPERATING EXPENSES (costs based on projected yield of 19 cwt/acre)	Sample Costs/Acre	Your Farm Budget
Seed – 70–80 lb/acre (4–5 seeds/ft row) certified, treated seed (with Cruiser insecticide)	154.00	
Fertilizer – nitrogen, if required		
– 20 kg/ha P	7.95	
– 40 kg/ha K	15.10	
Herbicide – annual grass	17.15	
– broadleaf weeds	23.25	
– other weed control, if required		
Insecticide		
Fungicide, if required		
Crop pre-harvest	8.80	
Tractor and Machine Expenses		
Fuel (31 L) and lubricants	30.40	
Repairs and maintenance	26.85	
Marketing fees ($5.00/tonne)	4.30	
Crop insurance	33.20	
Custom work – (fertilizer application, mixing and delivery)	10.10	
– (2 pesticide applications)	20.15	
Trucking ($8.15/tonne)	7.05	
Drying		
Land rent		
Operator labour (self or hired)	23.05	
Interest on operating	7.15	
Total Operating Expenses	**388.50**	
REVENUE		
Expected yield _____		
Expected price _____		
Total Market Revenue (Yield × Price)		
Less pick charges (typically 2%–4%)		
Program payment		
Total Revenue		
GROSS MARGIN (Revenue – Operating Expenses)		
OVERHEAD EXPENSES		
Machinery – depreciation	50.10	
– interest on investment	22.35	
Land		
Other overhead	18.40	
TOTAL EXPENSES	**479.35**	
Break-even price on your farm is: (total expenses/expected yield)_____		

GRAIN CORN

		Tillage System			
		Conventional	Minimum Till	No-Till	
OPERATING EXPENSES (costs based on projected yield of 3.81 tonne/acre (150 bu/acre))		Sample Costs/Acre	Sample Costs/Acre	Sample Costs/Acre	Your Farm Budget
Seed (average 3 hybrids)	– 32,000 kernels – treated – RR	91.40	91.40	91.40	
	– 32,000 kernels – treated – Bt	86.00	86.00	86.00	
	– 32,000 kernels – treated – Multi-trait	108.55	108.55	108.55	
Fertilizer[1]	– 144 kg/ha N (514 kg/ha of 28-0-0 U.A.N)	72.80	72.80	72.80	
	– 20 kg/ha P	7.95	7.95	7.95	
	– 50 kg/ha K	18.85	18.85	18.85	
Herbicide	– annual grass and broadleaf weeds	21.60	21.60	21.60	
	– burndown			8.80	
	– other weed control, if required				
Insecticide, if required					
Tractor and Machine Expenses					
Fuel (25 L conv., 16 L min, 10 L no till) and lubricant		23.40	17.30	11.50	
Repairs and maintenance		15.85	14.60	10.45	
Marketing fees ($0.40/tonne)		1.50	1.50	1.50	
Crop insurance		14.00	14.00	14.00	
Custom work – (fertilizer appl., mixing and delivery)		10.10	10.10	10.10	
	– (pesticide applications)	10.10	10.10	20.15	
	– other				
Trucking ($8.45/tonne)		32.20	32.20	32.20	
Drying ($17.95/tonne, 8 points)		68.35	68.35	68.35	
Land rent					
Operator labour (self or hired)		15.50	11.50	8.10	
Storage ($2.06/tonne/month × 4 months)		31.45	31.45	31.45	
Interest on operating		8.80	8.55	8.65	
Total Operating Expenses		**447.80**	**436.20**	**441.80**	
REVENUE					
Expected yield _____					
Expected price _____					
Total Market Revenue (Yield × Price)					
Program payment					
Total Revenue					
GROSS MARGIN (Revenue – Operating Expenses)					
OVERHEAD EXPENSES					
Machinery	– depreciation	28.45	27.30	18.85	
	– interest on investment	13.05	12.20	8.40	
Land					
Other overhead		11.20	10.25	7.10	
TOTAL EXPENSES		**500.45**	**485.90**	**476.10**	

Break-even price on your farm is: (total expenses/expected yield) _____

[1] Nitrogen rate is based on the nitrogen rate calculator. Nitrogen recommendation is for corn grown in southwestern/central Ontario, 2,800 HU, clay loam soil, following wheat with straw removed, with projected corn yield of 150 bu/acre, and nitrogen cost of $1.26/kg and corn price of $4.60/bu.

See www.gocorn.net for more accurate nitrogen requirements for corn. A CD version is available from OMAFRA's Agricultural Information Contact Centre at 1-877-424-1300.

SILAGE CORN

OPERATING EXPENSES		Sample Costs/Acre	Your Farm Budget
Seed	– 31,000 kernels, treated	88.55	
Fertilizer[1]	– 144 kg/ha N (514 kg/ha of 28-0-0 U.A.N)	72.80	
	– 20 kg/ha P	7.95	
	– 50 kg/ha K	18.85	
Herbicide	– annual grass and broadleaf weeds	8.80	
	– other weed control, if required		
Insecticide, if required			
Tractor and Machine Expenses			
Fuel (37 L) and lubricants		36.95	
Repairs and maintenance		21.85	
Silo repair and maintenance			
Crop insurance		14.00	
Silage inoculant			
Custom work	– (fertilizer application, mixing and delivery)	10.10	
	– (pesticide applications)	10.10	
	– other		
Land rent			
Operator labour (self or hired)		31.00	
Interest on operating		6.40	
	Total Operating Expenses	**327.35**	
REVENUE			
Expected yield _____			
Expected price _____			
	Total Market Revenue (Yield × Price)		
Program payment			
	Total Revenue		
	GROSS MARGIN (Revenue – Operating Expenses)		
OVERHEAD EXPENSES			
Machinery	– depreciation	37.95	
	– interest on investment	20.50	
Land			
Other overhead		8.80	
	TOTAL EXPENSES	**394.60**	

Breakeven price on your farm is: (total expenses/expected yield) _____

[1] Nitrogen rate is based on the nitrogen rate calculator. Nitrogen recommendation is for corn grown in southwestern/central Ontario, 2800 HU, clay loam soil, following wheat with straw removed, with projected corn yield of 150 bu/ac, and nitrogen cost of $1.26/kg and corn price of $4.60/bu.

See www.gocorn.net for more accurate nitrogen requirements for corn. A CD version is available from OMAFRA's Agricultural Information Contact Centre at 1-877-424-1300.

FLAX

OPERATING EXPENSES (costs based on projected yield of 0.71 tonne/acre)	Sample Costs/Acre	Your Farm Budget
Seed – 37.5 lb/acre certified, treated	22.20	
Fertilizer – 45 kg/ha N	22.15	
– 20 kg/ha P	7.95	
– 20 kg/ha K	7.55	
Herbicide – broadleaf weed control	6.70	
– grass weed control, if required	8.95	
– dessicant	8.80	
Fungicide		
Tractor and Machine Expenses		
Fuel (17 L) and lubricants	16.50	
Repairs and maintenance	15.55	
Crop insurance		
Custom work – (fertilizer application, mixing & delivery)	10.10	
– (2 pesticide applications)	20.15	
– other		
Trucking ($8.15/tonne)	5.80	
Storage		
Land rent		
Operator labour (self or hired)	12.45	
Interest on operating	3.30	
Total Operating Expenses – Grain	**168.15**	
Expenses for Straw		
Tractor and Machine Expenses		
Fuel	3.15	
Repairs and maintenance	3.25	
Twine	2.80	
Other	11.55	
Total Operating Expenses – Straw	**20.75**	
Total Operating Expenses	**188.90**	
REVENUE		
Expected flax yield _____		
Expected flax price _____		
Total Market Revenue (Yield × Price)		
Program payment		
Total Flax Revenue		
GROSS MARGIN (Revenue – Operating Expenses)		

OVERHEAD EXPENSES	Flax Only	Flax & Straw	
Machinery – depreciation	29.05	33.20	
– interest on investment	14.45	16.45	
Land			
Other overhead	11.25	12.30	
TOTAL EXPENSES	**222.90**	**250.85**	

Break-even price on your farm is: (total expenses/expected yield) _____

OATS

OPERATING EXPENSES (costs based on projected yield of 1.2 tonne/acre (78 bu/acre))	Sample Costs/Acre	Your Farm Budget
Seed – 85 lb/acre certified treated	29.35	
Fertilizer – 35 kg/ha N (Southern Ontario)	17.55	
– 55 kg/ha N (Northern Ontario)	27.15	
– 20 kg/ha P	7.95	
– 20 kg/ha K	7.55	
Herbicide – weed control, if required	6.95	
Fungicide (for premium quality market)	15.60	
Tractor and Machine Expenses		
Fuel (17 L) and lubricants	16.50	
Repairs and maintenance	15.55	
Crop insurance	7.05	
Custom work – (fertilizer application, mixing and delivery)	10.10	
– (2 pesticide applications)	20.15	
Trucking ($8.15/tonne)	9.80	
Storage		
Land rent		
Operator labour (self or hired)	12.45	
Interest on operating	3.05	
Total Operating Expenses – Grain (Southern Ontario)	**179.60**	
Total Operating Expenses – Grain (Northern Ontario)	**189.20**	
Expenses for Straw		
Tractor and Machine Expenses		
Fuel	3.15	
Repairs and maintenance	3.25	
Twine	2.80	
Other	11.55	
Total Operating Expenses – Straw	**20.75**	
Total Operating Expenses (Southern Ontario)	**200.35**	
Total Operating Expenses (Northern Ontario)	**209.95**	
REVENUE		
Expected oat yield _____		
Expected oat price _____		
Total Market Revenue (Yield × Price)		
Program payment		
Total Oats Revenue		
Expected straw yield _____		
Expected straw price _____		
Total Straw Revenue (Yield × Price)		
Total Revenue		
GROSS MARGIN (Revenue – Operating Expenses)		

OVERHEAD EXPENSES	Oats Only	Oats & Straw	
Machinery – depreciation	29.05	33.20	
– interest on investment	14.45	16.45	
Land			
Other overhead	11.25	12.30	
TOTAL EXPENSES (Southern Ontario)	**234.35**	**262.30**	
TOTAL EXPENSES (Northern Ontario)	**243.95**	**271.90**	

Break-even price on your farm is: (total expenses/expected yield) _____

SOYBEANS

		Tillage System			
		Conventional	No-Till	Roundup Ready No-Till	
OPERATING EXPENSES (costs based on projected yield of 1.14 tonne/acre (42 bu/acre))		Sample Costs/Acre	Sample Costs/Acre	Sample Costs/Acre	Your Farm Budget
Seed	– 177,000 seeds/acre in 15-in. rows – drill (165,000 seeds/acre in 15-in. rows – planter)	55.80	55.80	66.45	
Fertilizer	– nitrogen, if required				
	– 20 kg/ha P	7.95	7.95	7.95	
	– 40 kg/ha K	15.10	15.10	15.10	
Herbicide	– annual grass and broadleaf weeds	37.45	37.45	8.80	
	– burndown		8.80	8.80	
	– other weed control, if required				
Seed treatment/inoculant, if required					
Tractor and Machine Expenses					
Fuel (17 L conv., 8 L no till) and lubricants		16.50	8.90	8.90	
Repairs and maintenance		15.90	11.90	11.90	
Marketing fees ($1.10/tonne)		1.25	1.25	1.25	
Crop insurance		11.75	11.75	11.75	
Drying ($10.15/tonne)		11.05	11.05	11.05	
Custom work	– (pesticide application)	10.10	20.15	20.15	
	– (fertilizer appl., mixing and delivery)	10.10	10.10	10.10	
Added expense for IP					
Trucking ($8.15/tonne)		9.30	9.30	9.30	
Storage ($2.06/month/tonne x 4 months)		9.45	9.45	9.45	
Land rent					
Operator labour (self or hired)		12.45	6.45	6.45	
Interest on operating		4.50	4.50	4.15	
	Total Operating Expenses	**228.65**	**229.90**	**211.55**	
REVENUE					
Expected yield _____					
Expected price _____					
	Total Market Revenue (Yield x Price)				
Additional revenue from IP					
Program payment					
	Total Revenue				
	GROSS MARGIN (Revenue – Operating Expenses)				
OVERHEAD EXPENSES					
Machinery	– depreciation	29.65	18.45	18.45	
	– interest on investment	15.25	10.25	10.25	
Land					
Other overhead		11.50	7.15	7.15	
	TOTAL EXPENSES	**285.05**	**265.75**	**247.40**	
Break-even price on your farm is: (total expenses/expected yield) _____					

SOFT WINTER WHEAT

	Tillage System		
	Conventional	No-Till	
OPERATING EXPENSES (costs based on projected yield of 2.1 tonne/acre (76 bu/acre))	**Sample Costs/Acre**	**Sample Costs/Acre**	**Your Farm Budget**
Seed – 110 lb/acre certified treated (1.4–1.7 M seeds/acre)	44.90	44.90	
Fertilizer – 110 kg/ha N	54.10	54.10	
– 20 kg/ha P	7.95	7.95	
– 20 kg/ha K	7.55	7.55	
Herbicide – broadleaf weeds	7.50	7.50	
Fungicide			
Tractor and Machine Expenses			
Fuel (17 L conv., 8 L no till) and lubricants	16.50	7.80	
Repairs and maintenance	15.55	12.45	
Crop insurance	10.65	10.65	
Marketing board fee ($2.00/tonne)	4.20	4.20	
Custom work – (fertilizer application, mixing and delivery)	10.10	10.10	
– (pesticide application)	10.10	10.10	
Added expense for IP			
Trucking ($8.15/tonne)	17.10	17.10	
Land rent			
Operator labour (self or hired)	12.45	5.45	
Interest on operating	7.25	6.65	
Total Operating Expenses – Grain	**225.90**	**206.50**	
Expenses for Straw			
Tractor and Machine Expenses			
Fuel (3 L) and lubricants	3.15	3.15	
Repairs and maintenance	3.25	3.25	
Twine	2.80	2.80	
Other	11.55	11.55	
Total Operating Expenses – Straw	**20.75**	**20.75**	
Total Operating Expenses	**246.65**	**227.25**	
REVENUE			
Expected wheat yield _____			
Expected wheat price _____			
Total Market Revenue (Yield × Price)			
Additional income from IP			
Program payment			
Total Wheat Revenue			
Expected straw yield _____			
Expected straw price _____			
Total Straw Revenue (Yield × Price)			
Total Revenue			
GROSS MARGIN (Revenue – Operating Expenses)			

OVERHEAD EXPENSES	**Conventional**		**No Till**		
	Wheat Only	**Wheat & Straw**	**Wheat Only**	**Wheat & Straw**	
Machinery – depreciation	29.05	33.20	18.65	22.80	
– interest on investment	14.45	16.45	10.80	12.80	
Land					
Other overhead	11.25	12.30	7.05	8.10	
TOTAL EXPENSES	**280.65**	**308.60**	**243.00**	**270.95**	

Break-even price on your farm is: (total expenses/expected yield) _____

HARD RED WINTER WHEAT

	Tillage System		
	Conventional	No-Till	
OPERATING EXPENSES (costs based on projected yield of 2.1 tonne/acre (76 bu/acre))	**Sample Costs/Acre**	**Sample Costs/Acre**	**Your Farm Budget**
Seed – 140 lb/acre certified treated (1.4–17 M seeds/acre)	58.15	58.15	
Fertilizer – 110 kg/ha N	54.10	54.10	
– 20 kg/ha P	7.95	7.95	
– 20 kg/ha K	7.55	7.55	
Herbicide – broadleaf weeds	7.50	7.50	
– other weed control, if required			
Fungicide			
Tractor and Machine Expenses			
Fuel (17 L conv., 8 L no till) and lubricants	16.50	7.80	
Repairs and maintenance	15.55	12.45	
Crop insurance	10.65	10.65	
Marketing board fee ($2.00/tonne)	4.20	4.20	
Custom work – (fertilizer application, mixing and delivery)	10.10	10.10	
– (pesticide application)	10.10	10.10	
Added expense for IP			
Trucking ($8.15/tonne)	17.10	17.10	
Land rent			
Operator labour (self or hired)	12.45	5.45	
Interest on operating	7.70	7.05	
Total Operating Expenses – Grain	**239.60**	**220.15**	
Expenses for Straw			
Tractor and Machine Expenses			
Fuel (3 L) and lubricants	3.15	3.15	
Repairs and maintenance	3.25	3.25	
Twine	2.80	2.80	
Other	11.55	11.55	
Total Operating Expenses – Straw	**20.75**	**20.75**	
Total Operating Expenses	**260.35**	**240.90**	
REVENUE			
Expected wheat yield _____			
Expected wheat price _____			
Total Market Revenue (Yield × Price)			
Additional income from IP			
Program payment			
Total Wheat Revenue			
Expected straw yield _____			
Expected straw price _____			
Total Straw Revenue (Yield × Price)			
Total Revenue			
GROSS MARGIN (Revenue – Operating Expenses)			

OVERHEAD EXPENSES	Conventional		No-Till		
	Wheat Only	**Wheat & Straw**	**Wheat Only**	**Wheat & Straw**	
Machinery – depreciation	29.05	33.20	18.65	22.80	
– interest on investment	14.45	16.45	10.80	12.80	
Land					
Other overhead	11.25	12.30	7.05	8.10	
TOTAL EXPENSES	**294.35**	**322.30**	**256.65**	**284.60**	

Break-even price on your farm is: (total expenses/expected yield) _____

HARD RED SPRING WHEAT

OPERATING EXPENSES (costs based on projected yield of 1.29 tonne/acre (47.4 bu/acre))	Sample Costs/Acre	Your Farm Budget
Seed – 130 lb/acre certified treated (1.4–1.6 m seeds/acre)	55.85	
Fertilizer – 90 kg/ha N (200 kg/ha urea)	44.25	
– 20 kg/ha P	7.95	
– 30 kg/ha K	11.30	
Herbicide – broadleaf weeds	6.95	
– grass or wild oat control, if required		
– other weed control, if required		
Fungicide		
Tractor and Machine Expenses		
Fuel (17 L) and lubricants	16.50	
Repairs and maintenance	15.55	
Crop insurance	8.30	
Marketing board fee ($2.00/tonne)	2.60	
Custom work – (fertilizer application, mixing and delivery)	10.10	
– (pesticide application)	10.10	
– other		
Added expense for IP		
Trucking ($8.15/tonne)	10.50	
Land rent		
Operator labour (self or hired)	12.45	
Interest on operating	4.25	
Total Operating Expenses – Grain	**216.65**	
Expenses for Straw		
Tractor and Machine Expenses		
Fuel (3 L)	3.15	
Repairs and maintenance	3.25	
Twine	2.80	
Other	11.55	
Total Operating Expenses – Straw	**20.75**	
Total Operating Expenses	**237.40**	
REVENUE		
Expected wheat yield _____		
Expected wheat price _____		
Total Market Revenue (Yield × Price)		
Additional income from IP		
Program payment		
Total Wheat Revenue		
Expected straw yield _____		
Expected straw price _____		
Total Straw Revenue (Yield × Price)		
Total Revenue		
GROSS MARGIN (Revenue – Operating Expenses)		

OVERHEAD EXPENSES	Wheat Only	Wheat & Straw	
Machinery – depreciation	29.05	33.20	
– interest on investment	14.45	16.45	
Land			
Other overhead	11.25	12.30	
TOTAL EXPENSES	**271.40**	**299.35**	
Break-even price on your farm is: (total expenses/expected yield) _____			

WHITE/BLACK BEANS

OPERATING EXPENSES (costs based on projected yield of 19 cwt/acre)	Sample Costs/Acre	Your Farm Budget
Seed – 125,000–150,000 seeds/acre (60–70 lb/acre, 15–20-in. rows) certified, treated seed (with Cruiser insecticide)	70.00	
Fertilizer – nitrogen, if required		
– 20 kg/ha P	7.95	
– 40 kg/ha K	15.10	
Herbicide – annual grass	16.40	
– broadleaf weeds	20.75	
Crop pre-harvest	8.80	
Fungicide, if required		
Insecticide		
Tractor and Machine Expenses		
Fuel (22 L) and lubricants	21.85	
Repairs and maintenance	19.15	
Marketing fees ($7.97/tonne (white beans only))	6.90	
Crop insurance	24.20	
Custom work – (fertilizer application, mixing and delivery)	10.10	
– (2 pesticide applications)	20.15	
Trucking ($8.15/tonne)	7.05	
Drying		
Land rent		
Operator labour (self or hired)	16.70	
Interest on operating	5.30	
Total Operating Expenses	**270.40**	
REVENUE		
Expected yield _____		
Expected price _____		
Total Market Revenue (Yield × Price)		
Less pick charges (typically 2%–4%)		
Program payment		
Total Revenue		
GROSS MARGIN (Revenue – Operating Expenses)		
OVERHEAD EXPENSES		
Machinery – depreciation	35.70	
– interest on investment	15.95	
Land		
Other overhead	12.65	
TOTAL EXPENSES	**334.70**	
Break-even price on your farm is: (total expenses/expected yield) _____		

ORGANIC – GRAIN CORN AND SOYBEANS*

	Grain Corn	Soybeans	
OPERATING EXPENSES (costs based on projected yield of 2.67 tonne/acre (105 bu/acre) grain corn; 0.82 tonne/acre (30 bu/acre) soybeans)	**Sample Costs/Acre**	**Sample Costs/Acre**	**Your Farm Budget**
Seed – grain corn – 30,000 kernels, certified, organic; Soybeans – 180,000 seeds/acre, certified, organic in 21–30-in. rows	69.40	56.00	
Seed inoculant		2.00	
Fertilizer – Manure, compost**	100.00		
Herbicide			
Insecticide			
Fungicide			
Soil maintenance (cover crop, fallow etc.)**	50.00	50.00	
Tractor and Machine Expenses			
Fuel (28 L corn, 26 L soybeans) and lubricants	28.10	25.40	
Repairs and maintenance	20.15	24.70	
Marketing fees ($0.40/tonne (corn), $1.10/tonne (soybeans))	1.05	0.90	
Certification fees	3.00	3.00	
Crop insurance	14.00	21.45	
Custom work			
Added expense for handling organic crops			
Trucking ($8.45/tonne corn, $8.15/tonne soybeans)	22.55	6.90	
Drying ($17.95/tonne corn, $10.15/tonne soybeans)	47.85	8.30	
Storage ($2.06/tonne/month × 4 months)	22.00	6.75	
Land rent			
Operator labour (self or hired)	20.75	19.65	
Labour – hand weed	40.00	60.00	
Interest on operating	8.80	5.70	
Total Operating Expenses	**447.65**	**290.75**	
REVENUE			
Expected yield _____			
Expected price _____			
Total Market Revenue (Yield × Price)			
Program payment			
Total Revenue			
GROSS MARGIN (Revenue – Operating Expenses)			
OVERHEAD EXPENSES			
Machinery – depreciation	36.45	46.10	
– interest on investment	17.60	23.75	
Land			
Other overhead	11.80	17.85	
TOTAL EXPENSES	**513.50**	**378.45**	

Break-even price on your farm is: (total expenses/expected yield) _____

* Organic budget estimates do not include transition period costs.

**Manure, compost and cover crop estimates are highly variable depending on individual farm situations.

ORGANIC – WINTER WHEAT AND SPELT*

	Winter Wheat	Spelt	
OPERATING EXPENSES (costs based on projected yield of 1.36 tonne/acre (50 bu/acre) wheat; 1.0 tonne/acre spelt)	**Sample Costs/Acre**	**Sample Costs/Acre**	**Your Farm Budget**
Seed – wheat – 150 lb/acre certified, organic (1.4–1.7 M seeds/acre) – spelt – 180 lb/acre certified, organic	56.80	81.00	
Fertilizer – manure, compost**	100.00	100.00	
Herbicide			
Fungicide			
Soil maintenance (cover crop, fallow etc.)**	50.00	50.00	
Tractor and Machine Expenses			
Fuel (17 L) and lubricants	16.50	16.50	
Repairs and maintenance	15.55	15.55	
Crop insurance	11.40	13.00	
Marketing board fee ($2.00/tonne (wheat))	2.70		
Certification fees	3.00	3.00	
Custom work			
Added expense for handling organic crops			
Trucking ($8.15/tonne)	11.10	8.15	
Land rent			
Operator labour (self or hired)	12.45	12.45	
Labour – hand weed	30.00	30.00	
Interest on operating	10.30	10.95	
Total Operating Expenses – Grain	**319.80**	**340.60**	
Expenses for Straw			
Tractor and Machine Expenses			
Fuel and lubricants	3.15	3.15	
Repairs and maintenance	3.25	3.25	
Twine	2.80	2.80	
Other	11.55	11.55	
Total Operating Expenses – Straw	**20.75**	**20.75**	
Total Operating Expenses	**340.55**	**361.35**	
REVENUE			
Expected yield _____			
Expected price _____			
Total Market Revenue (Yield × Price)			
Program payment			
Total Revenue			
Expected straw yield _____			
Expected straw price _____			
Total Straw Revenue (Yield × Price)			
Total Revenue			
GROSS MARGIN (Revenue – Operating Expenses)			

OVERHEAD EXPENSES	**Wheat Only**	**Wheat & Straw**	**Spelt Only**	**Spelt & Straw**	
Machinery – depreciation	29.05	33.20	29.05	33.20	
– interest on investment	14.45	16.45	14.45	16.45	
Land					
Other overhead	11.25	12.30	11.25	12.30	
TOTAL EXPENSES	**374.55**	**402.50**	**395.35**	**423.30**	

Break-even price on your farm is: (total expenses/expected yield) _____

* Organic budget estimates do not include transition period costs.

**Manure, compost and cover crop costs estimates are highly variable depending on individual farm situations.

ORGANIC – BARLEY AND OATS*

	Barley	Oats	
OPERATING EXPENSES (costs based on projected yield of 1.2 tonne/acre (55 bu/acre) barley; 0.96 tonne/acre (62 bu/acre) oats)	**Sample Costs/Acre**	**Sample Costs/Acre**	**Your Farm Budget**
Seed – barley – 150 lb/acre certified, organic – oats – 105 lb/acre certified, organic	62.75	36.25	
Fertilizer – manure/compost**			
Herbicide			
Fungicide			
Soil maintenance (cover crop, fallow etc.) **	50.00	50.00	
Tractor and Machine Expenses			
Fuel (17 L) and lubricants	17.30	17.30	
Repairs and maintenance	16.65	16.65	
Crop insurance	7.05	7.05	
Certification fees	3.00	3.00	
Custom work			
Added expense for handling organic crops			
Trucking ($8.15 /tonne)	9.80	7.80	
Land rent			
Operator labour (self or hired)	14.55	14.55	
Labour – hand weed	30.00	30.00	
Interest on operating	7.00	6.05	
Total Operating Expenses – Grain	**218.10**	**188.65**	
Expenses for Straw			
Tractor and Machine Expenses			
Fuel and lubricants	3.15	3.15	
Repairs and maintenance	3.25	3.25	
Twine	2.80	2.80	
Other	11.55	11.55	
Total Operating Expenses – Straw	**20.75**	**20.75**	
Total Operating Expenses	**238.85**	**209.40**	
REVENUE			
Expected yield _____			
Expected price _____			
Total Market Revenue (Yield × Price)			
Program payment			
Total Revenue			
Expected straw yield _____			
Expected straw price _____			
Total Straw Revenue (Yield × Price)			
Total Revenue			
GROSS MARGIN (Revenue – Operating Expenses)			

OVERHEAD EXPENSES	**Barley Only**	**Barley & Straw**	**Oats Only**	**Oats & Straw**	
Machinery – depreciation	30.05	34.15	30.05	34.15	
– interest on investment	15.45	17.45	15.45	17.45	
Land					
Other overhead	12.05	13.10	12.05	13.10	
TOTAL EXPENSES	**275.65**	**303.55**	**246.20**	**274.10**	

Break-even price on your farm is: (total expenses/expected yield) _____

* Organic budget estimates do not include transition period costs.

**Manure, compost and cover crop costs estimates are highly variable depending on individual farm situations.

Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)

RESOURCES

Selected Factsheets and Publications	Order No.
Budgeting Farm Machinery Costs	01-075
Leasing Farm Equipment	09-035
Guide to Custom Farmwork and Short-Term Equipment Rental	10-049
Agronomy Guide for Field Crops	Publication 811
Guide to Weed Control, 2010–2011	Publication 75
Field Crop Protection Guide, 2009–2011	Publication 812
Soil Fertility Handbook	Publication 611

A full listing of publications is available on the OMAFRA website — www.ontario.ca/omafra — and can be ordered through ServiceOntario, available:

- online at www.publications.serviceontario.ca
- by telephone to the ServiceOntario Contact Centre
  Monday to Friday, 8:30 AM to 5:00 PM
  416-326-5300
  416-325-3408 (TTY)
  1-800-668-9938 Toll-free across Canada
  1-800-268-7095 TTY Toll-free across Ontario
- in person at ServiceOntario Centres throughout the province.

OMAFRA has excellent tools and information to help manage your farm business at the Agricultural Business Management section at www.ontario.ca/agbusiness. Results of the 2009 Custom Farmwork and Equipment Rental Rates survey are available here. The **Ontario Enterprise Budgets**, also found on the OMAFRA website, has budgets for cost of production, including field crops, posted with two display options. You can download a Budgeting Tool Excel file, modify the numbers to reflect your operation and the file will complete the calculations. The Budgeting Tool also lets you assess the potential effect of production and marketing risk factors and risk management strategies. Or you can view, and then print Manual Budget Forms that have a Sample Cost and a Your Farm column to input numbers manually in hard copy.

The Field Crop Budgets are updated by John Molenhuis, Business Analysis and Cost of Production Program Lead, OMAFRA, Brighton (john.molenhuis@ontario.ca) and Brian Hall, Edible Beans and Canola Specialist, OMAFRA, Stratford (brian.hall@ontario.ca).

Application rate conversions (approximate)

Metric to imperial	
litres per hectare × 0.09	= gallons per acre
litres per hectare × 0.36	= quarts per acre
litres per hectare × 0.71	= pints per acre
millilitres per hectare × 0.015	= fluid ounces per acre
grams per hectare × 0.015	= ounces per acre
kilograms per hectare × 0.89	= pounds per acre
tonnes per hectare × 0.45	= tons per acre

Imperial to metric	
gallons per acre × 11.23	= litres per hectare (L/ha)
quarts per acre × 2.8	= litres per hectare (L/ha)
pints per acre × 1.4	= litres per hectare (L/ha)
fluid ounces per acre × 70	= millilitres per hectare (mL/ha)
tons per acre × 2.24	= tonnes per hectare (t/ha)
pounds per acre × 1.12	= kilograms per hectare (kg/ha)
ounces per acre × 70	= grams per hectare (g/ha)

Liquid equivalents

litres/hectare	approximate gallons/acre
50 L/ha	= 5 gal/acre
100 L/ha	= 10 gal/acre
150 L/ha	= 15 gal/acre
200 L/ha	= 20 gal/acre
250 L/ha	= 25 gal/acre
300 L/ha	= 30 gal/acre

Dry weight equivalents

grams or kilograms/hectare	ounces or pounds/acre
100 g/ha	= 1½ oz/acre
200 g/ha	= 3 oz/acre
300 g/ha	= 4¼ oz/acre
500 g/ha	= 7 oz/acre
700 g/ha	= 10 oz/acre
1.10 kg/ha	= 1 lb/acre
1.50 kg/ha	= 1¼ lb/acre
2.00 kg/ha	= 1¾ lb/acre
2.50 kg/ha	= 2¼ lb/acre
3.25 kg/ha	= 3 lb/acre
4.00 kg/ha	= 3½ lb/acre
5.00 kg/ha	= 4½ lb/acre
6.00 kg/ha	= 5¼ lb/acre
7.50 kg/ha	= 6¾ lb/acre
9.00 kg/ha	= 8 lb/acre
11.00 kg/ha	= 10 lb/acre
13.00 kg/ha	= 11½ lb/acre
15.0 kg/ha	= 13½ lb/acre

Conversion tables — imperial to metric (approximate)

Area		
1 square foot	=	0.09 m^2
1 square yard	=	0.84 m^2
1 acre	=	0.40 ha
Volume (dry)		
1 cubic yard	=	0.76 m^3
1 bushel	=	36.37 L
Volume (liquid)		
1 fluid ounce (Imp.)	=	28.41 mL
1 pint (Imp.)	=	0.57 L
1 gallon (Imp.)	=	4.55 L
1 gallon (U.S.)	=	3.79 L
Weight		
1 ounce	=	28.35 g
1 pound	=	453.6 g
1 ton	=	0.91 tonne

Handy metric conversion factor

litres per hectare × 0.4 = litres per acre

kilograms per hectare × 0.4 = kilograms per acre

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1-877-424-1300
E-mail: ag.info.omafra@ontario.ca
Northern Ontario Regional Office:
1-800-461-6132

www.ontario.ca/omafra

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